

Comparisons of Job Characteristics

Focus Occupation: [Civil Engineers \(17-2051\)](#)

Associated Occupation: [Commercial and Industrial Designers \(27-1021\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 64

Focus Occupation: Civil Engineers (17-2051)

Associated Occupation: Commercial and Industrial Designers (27-1021)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Design	5.2	22.2	23.4	0	Current knowledge level may be sufficient
Engineering and Technology	5.7	18.3	24.5	>>	Current knowledge level is likely more than sufficient
Mechanical	6.8	15.3	7.9	<<	Extensive education and/or training may be required
Production and Processing	6.0	14.3	5.9	<<	Extensive education and/or training may be required
Physics	4.3	9.6	15.8	>>	Current knowledge level is likely more than sufficient
Fine Arts	2.2	5.3	1.5	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 83

Focus Occupation: Civil Engineers (17-2051)

Associated Occupation: Commercial and Industrial Designers (27-1021)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Operations Analysis	5.0	12.0	14.6	>	Skill level is likely sufficient
Technology Design	2.6	9.5	5.0	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 91

Focus Occupation: Civil Engineers (17-2051)

Associated Occupation: Commercial and Industrial Designers (27-1021)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Originality	7.6	14.7	12.0	<	Some improvement in abilities may be required
Deductive Reasoning	10.6	14.1	15.2	0	Current ability level may be sufficient
Near Vision	11.1	13.5	14.1	0	Current ability level may be sufficient
Visualization	7.5	13.1	14.1	0	Current ability level may be sufficient
Fluency of Ideas	7.6	12.8	11.5	<	Some improvement in abilities may be required
Information Ordering	9.9	11.9	13.8	>	Current ability level is likely sufficient
Category Flexibility	9.0	11.5	13.4	>	Current ability level is likely sufficient
Mathematical Reasoning	6.3	9.6	14.9	>>	Current ability level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 62

Focus Occupation: Civil Engineers (17-2051)

Associated Occupation: Commercial and Industrial Designers (27-1021)

Work Activities	Exclusivity of Activity
Analyze project proposal to determine feasibility, cost, or time	69
Analyze technical data, designs, or preliminary specifications	47
Draw prototypes, plans, or maps to scale	57
Read blueprints	10
Use computer aided drafting or design software for design, drafting, modeling, or other engineering tasks	58
Use computers to enter, access or retrieve data	3
Use drafting or mechanical drawing techniques	50

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 80

Focus Occupation: Civil Engineers (17-2051)

Associated Occupation: Commercial and Industrial Designers (27-1021)

Tools and Technologies	Exclusivity
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Business function specific software	1
Cameras	2
Computers	1
Content authoring and editing software	1
Data management and query software	1
Industry specific software	1
Information exchange software	1
Network applications software	1

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.